UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/695,820	10/24/2000	Bassam Tabbara	MSI-548US	1887

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EXAMINER
MANIWANG, JOSEPH R

ART UNIT	PAPER NUMBER
2144	

DATE MAILED: 05/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.		Applicant(s)
Office Action Summary	09/695,820		TABBARA ET AL.
	Examiner		Art Unit
	Joseph R Maniwang		2144

-- The MAILING DATE of this communication appears on the c ver sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>02 February 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-52</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-52</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>24 October 2000</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>4,5</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5, 7-12, and 14 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Moiin (U.S. Pat. No. 6,108,699), hereinafter referred to as Moiin, and

further in view of Coskrey, IV (U.S. Pat. No. 6,336,171), hereinafter referred to as

Coskrey.

Moiin disclosed a method and system for forming and modifying membership

clusters from nodes in a distributed computer system. Clusters were formed as a way

to restrict which nodes had access to data and resources (see column 1, lines 44-67).

Moiin disclosed a plurality of cluster membership monitors (CMM) for sharing

management responsibility of a node, each node being controlled by only one of the

plurality of CMMs during the execution of reconfiguration processes while the others

provided response messages, thus giving one CMM extended management rights and

the remaining CMMs more restricted management rights (see column 4, lines 13-21;

column 5, lines 18-31; column 5, line 66 through column 6, line 32). CMMs controlled

cluster membership, and thus enforced data access restrictions on other nodes as

memberships served the purpose of restricting data access (see column 1, lines 44-67).

The CMM contained a plurality of fields for identifying the restrictions (see column 5, lines 32-46). The system included network interface adapters for communicating between nodes (see column 5, lines 9-17).

Moiin described a system for controlling data access between nodes, but did not specifically disclose controlling data forwarding to an intended target, such as a component executing on the node.

Coskrey disclosed a resource protection method for use in a cluster environment. Clustered servers provided a way of restricting data access to other systems in the cluster (see column 1, lines 62 through column 2, lines 10), similar to the node cluster of Moiin. The system was capable of controlling the forwarding of data to an intended target by checking whether it was permissible to do so or not (see column 2, lines 43-58). Server nodes also included an operating system controlled by commands (see column 5, lines 10-18, 49-56).

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Moiin and Coskrey to provide a system for managing nodes through a plurality of management devices restricting the access of data between other nodes over a network, and further for controlling the forwarding of data to an intended target associated with the node only if it was permissible to do so. The combined references offered teachings on the broad concepts claimed, and also motivation for combining the two, as Coskrey disclosed the resource protection method as useful for maintaining data integrity in the case of a system failure within a cluster (see column 1, line 62 through column 2, line 10), a problem similarly recognized by

Moiin (see column 1, line 25-43). The combination of teachings would have provided

improved system failure handling in a cluster environment.

Claims 6, 13, and 15-25 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Moiin (U.S. Pat. No. 6,108,699) in view of Coskrey, IV (U.S. Pat. No.

6,336,171) as applied to claims 1 and 8 above, and further in view of Ehlinger et al.

(Eur. Pat. App. EP0962861), hereinafter referred to as Ehlinger.

The combination of the teachings of Moiin in view of Coskrey suggest a method

and system for forming and modifying membership clusters from nodes in a distributed

computer system. Clusters were formed as a way to restrict which nodes had access to

data and resources (see Moiin column 1, lines 44-67), and were managed by a plurality

of cluster membership monitors (CMM) (see Moiin column 4, lines 13-21; column 5,

lines 18-31; column 5, line 66 through column 6, line 32). Coskrey disclosed a resource

protection method for use in a cluster environment, capable of controlling the forwarding

of data to an intended target by checking whether it was permissible to do so or not (see

column 2, lines 43-58).

The teachings of Moiin in view of Coskrey suggest a system for creating node

clusters in a distributed computer system that restricted data access based on

membership using a CMM, but do not specifically disclose receiving control from a

management device remote from the cluster.

Ehlinger disclosed a method and system for improved cluster administration.

Ehlinger disclosed that a cluster owner determines data access rights to a resource

(see column 1, lines 31-39), a device analogous to the CMM of Moiin. Ehlinger,

however, disclosed such a device as remote from the cluster (see column 2, line 44

through column 3, line 14; column 4, lines 41-50; column 5, lines 17-22).

It would have been obvious to combine the teachings of Moiin in view of Coskrey

and Ehlinger to provide a distributed computer system with a node management device

remote from a cluster. One of ordinary skill in the art would have been motivated to

consider separating the CMM of Moiin from the cluster as taught by Ehlinger since a

remote management device improved the administration of computer clusters, removed

burden on the cluster, increased reliability, avoided cluster failures, and increased

scalability of the system (see column 1, lines 1-6; column 3, lines 30-50; column 4, lines

29-40; column 5, lines 23-32; column 8, lines 17-53).

Claims 26-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Moiin (U.S. Pat. No. 6,108,699), hereinafter referred to as Moiin, and further in view of

Gong (U.S. Pat. No. 6,125,447), hereinafter referred to as Gong.

Moiin disclosed a method and system for forming and modifying membership

clusters from nodes in a distributed computer system. Clusters were formed as a way

to restrict which nodes had access to data and resources (see column 1, lines 44-67).

Moiin disclosed a plurality of cluster membership monitors (CMM) for sharing

management responsibility of a node, each node being controlled by only one of the

plurality of CMMs during the execution of reconfiguration processes while the others

provided response messages, thus giving one CMM extended management rights and

the remaining CMMs more restricted management rights (see column 4, lines 13-21;

column 5, lines 18-31; column 5, line 66 through column 6, line 32). CMMs controlled

cluster membership, and thus enforced data access restrictions on other nodes as

memberships served the purpose of restricting data access (see column 1, lines 44-67).

The CMM contained a plurality of fields for identifying the restrictions (see column 5,

lines 32-46). The system included network interface adapters for communicating

between nodes (see column 5, lines 9-17).

Moiin described communication between CMMs, but did not disclose a third party

controller for mediating interaction between such management agents by assigning

each management agent to a different domain and restricting rights of each domain.

Gong disclosed a method and system for maintaining and enforcing data policy

through the use of domains. This allowed for determining whether requests for an

action should be permitted or not based on the source of the request and the domain

associated with the source (see column 3, lines 36-50). Domains were established

based on a set of rights (see column 6, lines 32-39; column 8, lines 40-49). Each

domain was associated with a domain object that restricted the rights of each domain

(see column 9, lines 40-53). Domains could be restricted based on a first set of rights

and a second set of rights, one set being more restricted than the other (see column 10,

line 63 through column 11, line 7). Gong disclosed management agents for managing

access to respective resources in each domain, and also an access controller for

mediating requests from a source to a resource manager (see column 12, lines 12-23).

It would have been obvious to one of ordinary skill in the art at the time of

invention to combine the teachings of Moiin and Gong to provide domains in which

interactions between management agents associated with each domain were mediated

by a controller. The claims generally relate to enforcing domain rights restrictions on

different sources. Moiin differs from this by not disclosing a controller for mediation

action between management agents, but is remedied by the teachings of Gong as Gong

discloses a controller for enforcing policies of a management agent. One of ordinary

skill in the art would have been motivated to consider the teachings of Gong as they

provided a simple way of implementing complex security policies, were easy to adapt to

changes in a system, and was a more granular security mechanism (see column 6,

lines 40-44; column 8, lines 23-33; column 10, line 63 through column 11, line 7).

Conclusion

The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Modiri et al. (U.S. Pat. No. 6,192,401) disclosed a system and method for

determining cluster membership in a distributed computer system.

van Ingen et al. (U.S. Pat. No. 6,615,256) disclosed a method and system using

a quorum arbiter for managing ownership to a network resource.

Hacherl (U.S. Pat. No. 6,324,571) disclosed a system for floating a master

server role within a domain of servers.

Moiin et al. (U.S. Pat. No. 6,449,641) disclosed determining cluster membership in a distributed computer system.

Eichert et al. (U.S. Pat. No. 6,393,474) disclosed a system for policy management in a network of multiple devices and protocols.

Funk et al. (U.S. Pat. No. 6,493,715) disclosed a method for controlling the operation of software executing on a cluster of systems.

Coskrey, IV et al. (U.S. Pat. No. 6,487,622) disclosed a system providing clusters with a quorum resource.

Mukherjee et al. (U.S. Pat. No. 6,466,978) disclosed a file system including a cluster manager and an admission controller for handling requests transferred across a network.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph R Maniwang whose telephone number is (703) 305-3179. The examiner can normally be reached on Mon-Fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William A Cuchlinski can be reached on (703)308-3873. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

JM

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